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Billingham, Mawdsley, and Williams, eds., Stroke: Proceedings of the Ninth Pfizer International Symposium, Churchill Livingstone, 1977, 152

Bollinger, Waugh, and Zatz, Communication Management of the Geriatric Patient, The Interstate Printers and Publishers, Inc., 1977, 248

Boone, The Voice and Voice Therapy, Prentice Hall, Inc., Publishers, 1977, 49

Buerger and Tobis, Approaches to the Validation of Manipulation Therapy, Charles C. Thomas, Publisher, 1977, 52

Cash, A Textbook of Medical Conditions for Physiotherapists, J. B. Lippincott Co., 348

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Cowan, Hall and Kandel, Annual Review of Neuroscience, Volume 1, 1978, Annual Reviews, Inc., 397

Creger, Coggins, and Hancock, Annual Review of Medicine: Selected Topics in the Clinical Sciences, Annual Reviews, Inc., 1977, 249

Cromwell, Butterfield, Brayfield, and Curry, Acute Myocardial Infarction: Reaction and Recovery, The C. V. Mosby Company, 1977, 249

Cull and Hardy, Physical Medicine and Rehabilitation Approaches in Spinal Cord Injury, Charles C. Thomas, Publisher, 1977, 152

Cyriax and Russell, Textbook of Orthopaedic Medicine, Vol. 2, Williams & Wilkins Co., 347

Dahlberg and Jaffe, Stroke – A Doctor's Personal Story of His Recovery, W. W. Norton & Co., Inc. Publishers, 1977, 49

Daniels and Worthingham, Therapeutic Exercise for Body Alignment and Function, W. B. Saunders Co., 1977, 52

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Geiger, ed., Handbook of Physiology, Williams & Wilkins Co., 348

Gilbert and Huntington, An Introduction to Pathology, Oxford University Press, 398

Giraudet, Inititation A L'Appareillages Des Handicapes Physiques, Maloine S. A. Editeur, 1976, 248

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Haerer and Currier, Neurology Notes, Little, Brown, & Co., 1977, 202

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Herveou and Messean, Technique De Reeducation Et D'Education Proprioceptive Du Genou Et De La Cheville, Maloine S. A. Editeur, 1976, 249

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Keith, Speech and Language Rehabilitation, A Work-

shop for the Neurologically Impaired, The Interstate Printers and Publishers, Inc., 1977, 152

Laurie, Housing and Home Services for the Disabled: Guidelines and Experience in Independent Living, Harper & Row, Publishers, Inc., 1977, 202

Le Veau, Williams and Lissner: Biomechanics of Human Motion, W. B. Saunders Co., 297

Leger, Le Petit Livre Rouge De L'Acupuncture, Maloine S. A. Editeur, 1976, 202

Lenman & Ritchie, Clinical Electromyography, J. B. Lippincott Co., 1977, 49

Madden and Hume, Venous Thromboembolism: Prevention and Treatment, Appleton Century Crofts, Publishers, 48

May, Enterostomal Therapy, Raven Press Medical and Scientific Publisher, 1977, 201

Newman and Price, Urinary Tract Care, University of Minnesota, 297

Payton, Hirt, and Newton, Scientific Bases for Neurophysiologic Approaches to Therapeutic Exercise, F. A. Davis Co., 1977, 296

Poland and Fairchild, The Musculoskeletal System: Body
 Systems Series, Medical Examination Publishing Company, Inc., 1977, 348
 Roaf and Hodkinson, The Paralyzed Patient, Blackwell

Scientific Publications, 1977, 201

Rozenzweig and Porter, eds., Annual Review of Psychology, Annual Review, Inc., 1978, 397

Seligman, Group Counseling and Group Psychotherapy with Rehabilitation Clients, Charles C. Thomas, Publisher, 1977, 52

Sine, Liss, Roush, and Holcomb, Basic Rehabilitation Techniques, A Self-Instructional Guide, Aspen Systems Corp., 347

Smorto and Basmajian, Electrodiagnosis: A Handbook for Neurologists, Harper & Row, Publishers, Inc., 1977, 102

Solomon and Plum, Clinical Management of Seizures: A Guide for the Physician, W. B. Saunders Company, 50 Stewart, Traction and Orthopaedic Appliances, Longman, Inc., 1975, 201

Strub and Black, The Mental Status Examination in Neurology, F. A. Davis Company, 1977, 348

Turek, Orthopaedics – Principles and Their Appliances, J. B. Lippincott Co., 398

Wanono, Synthese Des Techniques Therapeutiques Vertebrales: Osteopathie Chiropoactic. Chirotherapie, Librairie Maloine S. A., 297

Ward, Mountain Medicine, Van Nostrand Reinhold,

Webb, Notes on Orthopedic Nursing, Churchill Livingstone, 398

Weinstein, Ehni, and Wilson, Lumbar Spondylosis: Diagnosis, Management and Surgical Treatment, Year Book Medical Publishers, 398

Wertheimer and Bush, Perspectives on Medicines in Society, Drug Intelligence Publications, 297

West, Ventilation/Blood Flow and Gas Exchange, J. B. Lippincott Co., 1977, 102

Wickstrom, Fundamental Motor Patterns, Lea & Febieger, 1977, 48

Williams and Sperryn, Sport Medicine, Williams and Wilkins Co., 1977, 50

World Health Organization, Legislative Action to Combat Smoking Around the World: A Survey of Existing Legislation, World Health Organization, 52

Yanda, Doctors as Managers of Health Teams: A Career Guide for Hospital-Based Physicians, American Management Association, 1977, 48

Zimmerman, Techniques of Patient Care: A Manual of Bedside Procedures, Little, Brown & Co., 296

Zuidema and Schlossberg, The John Hopkins Atlas of Human Functional Anatomy, The John Hopkins University Press, 49

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